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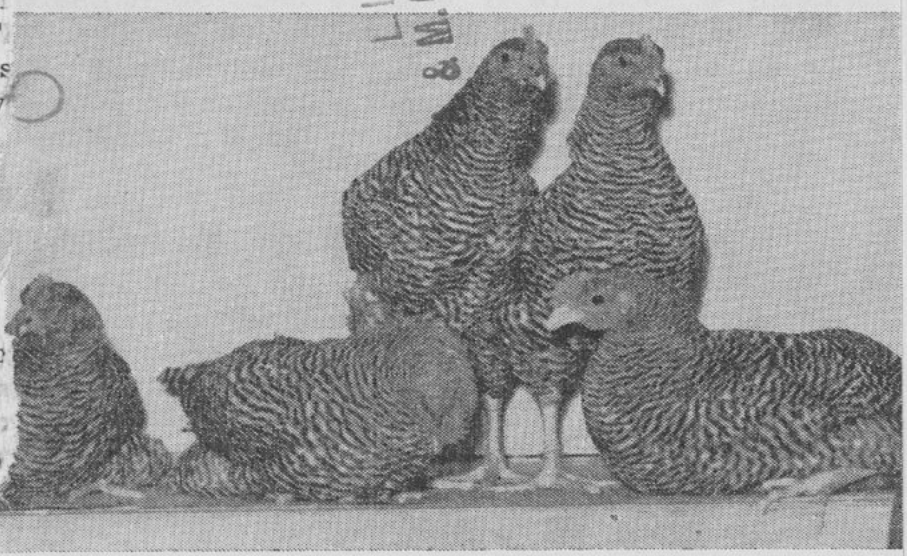
BROILER PRODUCTION



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BROILER PRODUCTION

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Broilers are produced both as a by-product of pullet production and as a specialized commercial business for the production of pullets and cockerels as meat. Factors favoring commercial broiler production are, small investment and quick return of money so used. Normally an investment of less than $400 is required for land, houses and equipment for a 1,000 capacity broiler plant. The same equipment may be used for two or three broods yearly, thus reducing the investment per bird accordingly. Equipment used for brooding pullets for laying flock replacement also may be used to produce one or two broods of commercial broilers during the season the equipment ordinarily would be idle.

Not more than $500 is required to finance the production of 1,000 broilers, if all labor is hired. This may be reduced by $50 if no hired labor is used. Broilers usually are marketed at 10 to 12 weeks of age so that the money needed is in use only 3 months per brood.

Systems of Production

There are three main systems of producing broilers: (1) long broiler houses, sometimes called multiple-unit, (2) colony houses and (3) battery brooders. Those starting the broiler business usually adopt one of these, although a combination of batteries and colonies, or a combination of batteries and multiple-unit houses may be used.

Multiple-unit houses may vary in length from 50 feet to 700 feet, and in depth from 16 feet to 24 feet. Usually they are built as shed or combination roof type and are divided into pens by wire, board or sack partitions, each pen being of a size to care for 500 to 600 chicks to broiler size.

Advantages claimed for the multiple-unit system are: Less labor to feed and care for birds; less cost per chick housed; a centralized heating system may be used, thus saving fuel; less land needed than with colony houses. **Objections to such a system are:** Adjoining yards become contaminated with diseases

and parasites when used with several broods; little green feed can be grown for chicks; bronchitis will spread rapidly to all pens if ever introduced; and houses cannot be moved to clean ground.

Colony house brooding is widely used in Texas. Houses from 8 by 10 feet up to 18 by 32 feet may be located over the farm and moved to clean ground after each brood has been sold. However, it is usually impractical to move houses that are larger than 16 feet by 16 feet. **Advantages claimed for this type of house are:** Full benefit of sunlight and green feed, thus saving on the feed bill, and preventing nutritional disorders; houses may be moved away from diseases and parasites left in the soil by previous broods; and contagious diseases are not so likely to spread from house to house. **Disadvantages of colony houses are:** Labor of feeding and management is slightly greater than for other systems; with portable houses, water cannot be piped to them so easily; operator is exposed to all types of weather; and housing cost is greater than for multiple-unit system.

Battery brooding is a highly specialized means of raising chicks by confining them in small cages with wire floors. There usually are five sections to each brooder, each large enough to accommodate 100 to 150 day-old chicks. The batteries are usually placed in rooms which have extra heat and in which both the heat and moisture may be controlled. **Advantages claimed for battery brooders are:** Conditions are more sanitary; the operator is not exposed to bad weather; no litter is required; less land is needed than with other systems; chicks grow faster, more uniformly and with less mortality, and the meat is juicer and more tender than that of range reared birds. **Objections to batteries are:** Nutritional ailments (rickets and slipped tendon) and cannibalism are more common in batteries; therefore, battery-raised chicks require more careful feeding than those raised in other systems; breast blisters may develop, thus lowering market value of the birds; labor, equipment and some other costs are higher than for other brooding systems; and broilers shrink excessively when shipped long distances alive.

Start With Chicks That Will Live and Grow

In buying chicks it is necessary to consider the breeding and feeding of the parent flocks, care of the hatching eggs, proper incubation, and freedom from diseases, particularly Pullorum disease. A broiler producer who chooses a reliable hatchery and makes a contract for the chicks he wants, WHEN he wants them, can forget the problems leading up to beginning of the brooding operation. Every precaution should be taken to buy disease-free chicks and to keep them free from diseases until marketed. This practice is important to successful broiler production.

Best Breeds of Chicks for Broiler Production

First, let's consider the requirements of a high quality broiler. **FULLY FLESHED — WELL FATTENED — COMPLETELY FEATHERED.** Those are the principal requirements of buyers of live broilers. Some markets specify color of plumage, because some buyers have come to associate a particular color with high quality dressed birds. Many markets insist on yellow shanks and skin. Practically every market is today demanding larger broilers. As a producer of broilers you are interested in producing the well-fleshed, fully fattened and completely feathered bird of the type and size demanded by the market you are supplying. In addition, you desire a chicken that is healthy and that will make rapid gains. There are distinct breed and strain differences for these qualities.

Barred Plymouth Rocks long have been popular as broilers and fryers. They are a yellow skinned and shanked breed, are of good body conformation, fatten well and some strains feather well. New Hampshires grow fast, live well, and are fast in feather development. White Plymouth Rocks feather and grow well but some strains are somewhat bony in conformation. White Wyandottes make good broilers but usually are in short supply. Cross-breed chickens that are widely used for broilers include the Barred Rock × New Hampshire or R. I. Red, White Wyandotte × New Hampshire, Australorp × White Leghorn, and New Hampshire × White Leg-

horn. Cockerels from the last two crosses are likely to grow large combs and appear staggy if grown to a large size.

Provide Plenty of Space

Give chicks room to grow. In colony houses, two chicks per square foot or 300 chicks in a 12 x 12 foot house, gives enough room for proper growth, provided free range or sunporches are available at the end of two weeks. In batteries, 10 square inches of floor space is enough for 2 weeks, at which time it should be increased to 20 inches. At 5 weeks of age 30 to 40 square inches of battery floor space is needed by each chick, and by the time the birds are eight to nine weeks of age, ½ square foot of floor space is necessary for each. Provide an inch of feeder space per chick to start, and double this amount by the fifth or sixth week. Enough watering space should be provided so that one-fourth of the chicks may drink at one time.

Sanitation

Sanitation means freedom from disease. It includes dryness and cleanliness. Practice it before the chicks get sick and you are likely to keep them well. If you have purchased healthy chicks, steps to keep them healthy include:

1. Scrape, sweep, thoroughly clean and disinfect brooder house and equipment several days before the chicks arrive and move the house to clean ground (clean ground is soil which has been free of chickens and turkeys, or manure from them, for two years).

2. Keep chicks of one age together. Never let chicks come in contact with old hens. If at all possible, try to have only one age of chicks on the place at a time.

3. Keep the house dry and clean during the entire brooding period. A deep layer of highly absorbent litter should be placed on the brooder floor before the chicks arrive. Turn it over daily with a handrake while the chicks are young, and twice daily as they grow older. Change to fresh litter as needed. Place feeders and waterers on wire platforms. Eliminate wet

spots when they occur. Diseases thrive on warmth and moisture.

4. Eliminate standing water and mud puddles in yards as soon as possible after rains. Use artificial shade in the yards and move to clean ground regularly. Once a week is not too often.

Getting the Chicks Off to a Good Start

Clean, healthy chicks deserve a clean home. Fill the feeders and waterers, cover litter with feed sacks until chicks locate the feed. Place a chick guard 16 inches from the hover to avoid chilling of chicks. Place chicks under hover that carries a 95 to 97 degree temperature and get them to eating early. Full-feeding means profitable feeding. The quicker you get the broilers to market the more profit you make. Follow the feeding system you like, but keep them eating fresh, wholesome feed and drinking clean, fresh water.

When Trouble Appears, Act Promptly to Avoid Heavy Losses

Spend a few minutes each day studying your chicks. Develop a 'chicken eye' and spot trouble early. When off-condition birds appear proceed as follows:

1. Remove and burn any chicks that are dead, and remove those in very weak condition.

2. Either isolate sick chicks or, better still, move all the remaining healthy chicks to new quarters.

3. Get a quick but accurate diagnosis of your trouble to your county agricultural agent and follow his advice promptly.

4. Place the pen under quarantine and either take care of this pen last or else change clothes and shoes after entering the pen.

5. Do an extra good job daily in cleaning feeders, waterers, and other equipment. A daily change of litter will help greatly.

Feeding the Chicks

Feed may be all mash, mash and grain, or some variation of the two. The system followed is not as important as getting feed down the chicks. If commercial feed is used, the system recommended by the manufacturer usually gives best results.

The value of a feed should be measured by the results it produces rather than by the price per pound. Low protein feeds are usually lower in price than high protein feeds, but since high protein feeds produce more rapid gains they are usually the more economical.

Pounds of feed per pound of gain can be controlled by the producer to some extent by:

1. Full feeding from the time the chicks are housed until they are sold to market (fast gains are cheap gains).

2. Keeping death losses at a low level (feed eaten by chicks that later die must be charged to those that live).

3. Providing feed which was compounded of fresh high quality ingredients by a good formula.

4. Avoiding waste of feed from hoppers (fill feeders half to two-thirds full after chicks have learned to eat). Use hoppers of correct size.

5. Supplement the ration with home grown green feeds where practical (excess green feed slows growth as high water content makes bulk without providing sufficient nutrients).

The following figures show the approximate amount of feed required for 100 chicks. The amount of feed actually consumed will vary with different lots of chicks, but these figures may serve as a guide in estimating feed requirement:

Feed	Consumed	by	100	Chicks	During	1st	Week	.....	10 lbs.
"	"	"	"	"	"	2nd	"	.....	20 "
"	"	"	"	"	"	3rd	"	.....	40 "
"	"	"	"	"	"	4th	"	.....	45 "
"	"	"	"	"	"	5th	"	.....	50 "
"	"	"	"	"	"	6th	"	.....	70 "
"	"	"	"	"	"	7th	"	.....	90 "
"	"	"	"	"	"	8th	"	.....	110 "
"	"	"	"	"	"	9th	"	.....	115 "
"	"	"	"	"	"	10th	"	.....	120 "
"	"	"	"	"	"	11th	"	.....	130 "
"	"	"	"	"	"	12th	"	.....	140 "

Setting Some Standards in Raising Broilers

Here are a few standards that may serve as goals in the development of an efficient broiler production program:

1. Produce a 2 pound broiler in 9 weeks. (summertime takes longer).

2. Hold feed consumption to 8 pounds for a 2 pound broiler.

3. Keep mortality or death loss to 10% or less—the lower the better.

4. Fill your houses 3 times yearly, brood 10,000 at a time for a one man unit, and sell off all chickens each time. Layers do not belong on a broiler farm. Let others produce eggs.

Cost of Producing Broilers

The following table and statement were taken from the report of the Texas Agricultural Experiment Station, "Requirements and Costs of Producing Broilers in Gonzales County," by A. C. Magee, Economist in Farm Management:

Cost of producing 100 pounds of broilers, Gonzales County, calculated as of February 4, 1944:

Items	Unit	No. or Amt. Used	Unit Cost	Av. cost per 100 lbs. of broilers produced
				Dollars
Baby chicks	Number	58.1	$10.81 per 100 chicks	6.28
Feed:				
Mash	Pounds	423.5	$ 3.89 per cwt.	16.47
Grain	Pounds	53.1	$ 3.40 per cwt.	1.80
Milk	Pounds	2.0	$ 5.36 per cwt.	.11
Grit	Pounds	6.0	$ 1.21 per cwt.	.07
Brooding—kerosene	Gallons	5.5	$ 0.08 per gal.	.44
Labor	Hours	8.4	29.5 cents per hour	2.48
Medication and sanitation				.77
Power costs—horse feed, car and truck expense				.34
Repair costs: Improvements				.34
Equipment				.17
Misc. costs—insurance, taxes, annual supplies				.23
Depreciation: Improvements				.65
Equipment				.46
Interest on investment at 5%				.51
Total cost per 100 pounds of broilers				31.12

Under the heading "Increasing Efficiency of the Broiler Enterprise," Mr. A. C. Magee concluded his study by saying: "The average death rate of 21.4% justifies serious consideration . . . some operators consistently had lower losses than this. One operator sold 27,767 broilers from 30,000 chicks started for an average liveability of 92.3%. Strong, healthy baby chicks are essential if death rates are to be kept low. Even when the grower obtains thrifty chicks, death losses are bound to occur even with the best of management. In general, however, management and care in brooding, feeding, and preventing and controlling disease greatly influences death rates. Death losses late in the growing period increase the amount of feed required per bird marketed which in turn increases cost.

"The average of 4.8 pounds of feed fed per pound of broiler produced should offer opportunity for improvement. One of the more efficient feeders produced 56,828 pounds of broilers from 216,300 pounds of feed. This was an average of 3.8 pounds of feed per pound of broiler. A reduction of ¾ pound of feed to produce a pound of meat would have saved 2½ to 3¢ in the cost of producing broilers in 1943. This amount frequently means the difference between profit and loss . . . Wasteful feeding methods are not uncommon and account for some of the inefficient use of feed on the part of growers. The use of feeding equipment that minimizes feed waste is especially important during periods of high feed prices.

"It is important that the feed used be fresh and free of mold or similar damage. Several farmers reported digestive disorders among their birds, increased death losses and periods of slow gain, which they attributed to damaged feed. Some growers stated that they have reduced feed costs by providing green vegetation in the yard . . . Numerous farmers were not taking advantage of this opportunity to lower costs."

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